OPENSYNTH NEKO™

neKo™ and neKo64™ User's Guide

Open Labs™

the future is open™

TABLE OF CONTENTS

Setting Up

Unpacking and powering up your neKo™

The first time you open the box, you should ensure that all the parts are enclosed. Because each OpenSynth™ neKo™ may be customized with different options, you should validate its contents with your order. Ensure that all components are included and that none of them were damaged during shipping.

Select a flat tabletop to unpack your neKo™ that is near a stable power supply, preferably one that is surge-protected or an uninterrupted power source (UPS). Network availability is also a plus, especially if you plan to transfer work through a local area network (LAN). It is also recommended that you have a notepad nearby to jot down important information, such as your serial numbers, license keys for software, or any notes you may have.

- Ensure that your OpenSynth™ neKo™ rests in the center of your workspace so that none of the air vents are obstructed.

- There should be ample room on the side of the neKo™ to allow for the CD-ROM tray to eject without obstruction.

Connecting the Cables

The neKo™ contains all the common interfaces you would find on a computer workstation. On the back panel you will find 2 USB ports, 1 VGA-monitor port, Ethernet port (10/100), PS/2 mouse, and PS/2 keyboard. Audio ports include: 10 in/ 10 out, PCI Digital Recording Interface with MIDI, S/PDIF I/O, MIDI i/o, wordclock I/O, XLR Microphone inputs with pre-amps, MIDI In/Out/ Out/Through.

The front panel houses 2 additional USB ports to allow connection of peripherals and devices, as well as a headphone output jack and headphone volume control.

Turning on the neKo™ for the First Time

The power switch is located on the right side of the neKo™ within the recessed area. **You must also turn on the touchscreen display by pressing the power button (for the touchscreen) on the back of the neKo™, directly behind the touchscreen display.**

Upon powering up, the neKo™ will boot up in 2 phases: The first phase is the BIOS phase, or the pre-Microsoft Windows phase. This is when the hardware validates that all systems are functional within acceptable parameters. PCI devices, onboard memory, and other system devices run through a short diagnostic routine, then the system will begin to load the operating system – Microsoft Windows XP Professional. **It is normal for the BIOS screen to load upside down on your display. Once Windows XP loads, the screen will rotate to the correct orientation.**

Unless you plan to make immediate hardware changes, there is no need to access any of the BIOS configuration menus. If you do plan to make some BIOS modifications, you can access the BIOS by hitting the DELETE key when the neKo™ first boots.

Note

System BIOS is a menu where you can configure your hardware settings. The settings pertain to hardware only, and will sometimes affect your software programs if configured incorrectly. If you plan to make modifications to the BIOS, it is recommended that you read the motherboard manual which is provided with your system. This manual contains all the configuration options supported by your neKo™.

The second phase loads Microsoft Windows XP Professional. This is an optimized installation of Windows XP, meaning that it contains all the tweaks that will enhance neKo™ performance. Since this is the "Professional" rather than the "Embedded" version of the Windows package, your OpenSynth™ neKo™ has all the potential to be your most powerful sound production appliance without any hindrance to any computer-driven applications. Any software supported under that Microsoft Windows XP platform will be supported by your neKo™. After the system is fully booted, you should be in the Open Labs graphical user interface (GUI). For more information about the Open Labs GUI, see chapter 3.

Note

The GUI is not a standard part of Microsoft Windows XP. It is a customizable overlay to the standard Microsoft XP work environment. You can toggle between the two modes by clicking on the Open Labs Icon and selecting QUIT. You can always reinstate the GUI by accessing the shortcut provided on the desktop.

What's next?

For a comprehensive overview of your neKo™, please continue to the next chapter.

Chapter

2

Introduction to your neKo™

Knowing your neKo™…

The neKo™ is the ultimate performance and studio instrument. It is simply the most advanced, flexible and cost effective product available today. Since it is based on our OpenSynth™ platform, neKo™ frees you from all of the frustrating limitations imposed by closed, proprietary systems, while still maintaining the virtues of an all-in-one keyboard instrument.

Open Sounds: neKo™ can emulate almost any instrument ever invented by hosting industry standard VSTi software synthesizers, samplers and audio processing plug-ins.

Open System: neKo™ utilizes industry standard micro-ATX motherboards and processors that allow you to run standard operating systems (such as Microsoft Windows), and use standard PC-compatible hardware.

All in One: neKo™'s all in one design eliminates the clutter and confusion of traditional desktop computer systems so you can focus on what really matters... The music.

User Friendly: neKo™ enables you to change settings and access programs through an easy to use interface that shields you from the complexities of the operating system.

Power to Rock: neKo™ can accommodate the fastest processors available, and more RAM and storage than any other music workstation.

Low Latency: neKo™ gives you near-zero latency even under high processor loads.

Instant On: Unlike traditional computers that may take minutes to start up, neKo™ utilizes a unique process that allows the keyboard to start up in seconds.

Interchangeable Control Modules: neKo™'s interchangeable control modules provide a physical interface for easier control of software instruments, and are designed to support virtually any future control options.

Non Stop™ Music: neKo™ is the only musical instrument with the option for integrated power management to combat power spikes, and operate during power interruptions.

See neKo™ Run: neKo™ is so versatile it can virtually run any plug-in or application designed for the Windows XP operating system including products from Steinberg, Native Instruments, Synapse Audio, IK Multimedia and many others!

Bring It!: equipped with PCI slots that can accept up to FULL SIZE cards, the neKo™ can accommodate your favorite Creamware and Digidesign cards, providing unsurpassed power with grace.

Modern Art: With a sleek, modern design incorporating an aluminum chassis and rubber bezels, neKo™ is as beautiful as it is powerful.

Surfboard: neKo™'s included Ethernet port allows you to directly access the Internet, to quickly and easily download upgrades, sounds and applications.

There is a difference. The neKo™ is the most powerful music production product available today. It is not a general-purpose computer, nor is it a dead-end dedicated hardware piece that will soon become obsolete. It gives you everything that you are used to in a dedicated musical product with Super Computer

Processing and Perpetual Upgradeability. It's something new and it's wonderful.

Because neKo™s are extremely powerful instruments, a musician may use one as is but may also need to add new hardware or software. The versatility to grow and adapt to every musician's need is why neKo™ is unique. Extreme care should be taken when installing new hardware and software. Installing the wrong components could cause great instability to your neKo™. Be sure to read Chapter 4 for information about installing new functionality to your neKo™ before installing any new devices or software.

neKo™ Components

CDRW Drive
neKo™ comes standard with a CD-writer so that you may either use it as a backup device or use it to create CD's of your music. CDRW drive can also be used to play CDs or install software. DVDRW drives may also be purchased through Open Labs.

Hard Drive
The hard drive is the main physical storage device for all your data and applications. In the neKo™, the hard drive can be removed from the chassis depending on your configuration. The portability of the hard drive allows for enhance security in a studio environment where you may wish to remove your hard drive to secure your data from public access. Because hard drives are delicate devices, always treat them with care and do not drop, soak, heat, or otherwise abuse them.

Power Button/Reset Button
The power switch and reset buttons are located in the recessed area to the right of the keyboard, on the side of the neKo™.

M-Audio Delta 1010LT Audio Card
Your neKo™ includes an M-Audio Delta 1010LT Audio Card. Please refer to the M-Audio manual included with your neKo™ for information and specifications about this card.

Front USB Ports (2)
USB (USB 1.0) ports are located next to the headphone jack and headphone volume on the front of the neKo™. These ports are ideal for attaching USB input devices such as dongles, or flash memory sticks.

Rear USB Ports (2)
Two rear USB (2.0) ports allow connections to USB-2 devices.

Monitor Ports
The monitor port allows you to connect any monitor with a standard VGA connector to the neKo™.

Ethernet 10/100
The Ethernet port will accept a single high-speed cable connection. This will allow your neKo™ to share files, print, and access the Internet.

Audio I/O Panel
The neKo has a custom audio panel on the rear of the unit which features: 8 analog balanced/unbalanced inputs and outputs, 2 mic (XLR) pre-amps, SPDIF input and output, Wordclock I/O, 1 MIDI in, 2 MIDI outs, 1 MIDI through.

Note

The XLR inputs and outputs mirror the ¼ inch analog inputs & outputs (in/out #1 and #2). When using the XLR connections, the parallel ¼ inch connections will not be available.

DIMM Expansion Slots

You can install additional memory into your neKo64™ (up to 8 GB).   neKo64™ supports 184-pin ECC-type modules (PC2700/2100/1600).   Only the neKo64™ can hold 8 gigs. The neKo™ P4 version only holds 2GB of *unregistered* memory. Please use Open Labs certified parts to maintain your warranty.

PCI Expansion Slots

PCI slots are for adding additional hardware boards such as I/O cards, DSP cards, or additional graphics boards. PCI boards should all be Microsoft Windows XP compatible. If you are unsure, please call Open Labs technical support.

AGP Expansion Slot

The AGP slot is for the primary graphics card. neKo™ comes standard with NVIDIA AGP graphics card. You may wish to upgrade the graphics card at a later time. neKo™ supports up to 8X AGP graphics cards.

Touch-screen Monitor

Some models of neKo™ come with a touch-screen monitor. The touch-screen can be accessed using your fingertips, or a small plastic pointer. The touch screen provides an alternative method of input for commands to the neKo™. It can be used by itself as the sole source of command input, or it can be used in conjunction with the built-in keyboard and track pad, or a standard keyboard and mouse.

Chapter

3

Using Your neKo™

Learning the neKo™ GUI and Applications.

This chapter provides helpful instructions on how to use some of the more commonly accessed applications in the neKo™.

The first time you fire up your neKo™ you may realize that it looks nothing like Microsoft Windows XP. The new look is the Open Labs graphical-user interface that will enhance your productivity, especially if you are a touch-screen user.

What is this GUI?

The GUI, or graphical user interface, is a customizable shell that allows the launching of applications from a single location. This GUI is optimized for use with a touch screen and for musical performance. Traditionally, within the Microsoft Windows environment, you would have to make shortcuts for applications you use most often, and arrange them on your desktop or system tray for easy access. Because these items are often masked by open applications and windows, you may have to reposition your windows every time you wish to initiate a new application.   Starting programs via the 'start' button is also not ideal, because the program groups contain *all installed programs*, rather than just those few applications you use the most.

The Open Labs GUI is designed to allow access to the programs and tasks that you will use most frequently with your neKo™. After powering up your neKo™, Windows XP Pro will launch, followed by the Open Labs GUI. You will notice right away how the GUI organizes and simplifies the tasks associated with making music.

A desktop with the taskbar looks like this. Currently active applications will appear on the taskbar. If too many applications appear the user can scroll left and right. The button with the Open Labs icon in the lower left will expand up with a series of buttons.
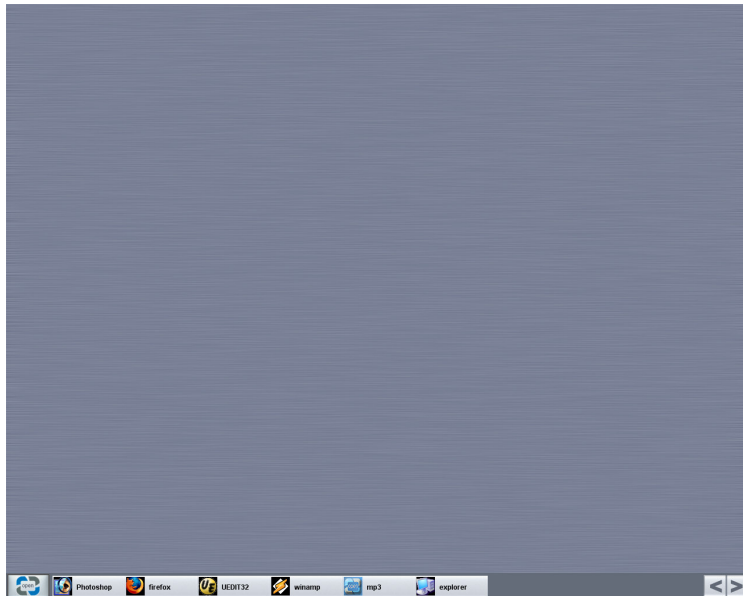
On your screen you will see the "**Open**" Icon in the lower left-hand corner. Clicking on this icon will provide you with shortcuts to the following:
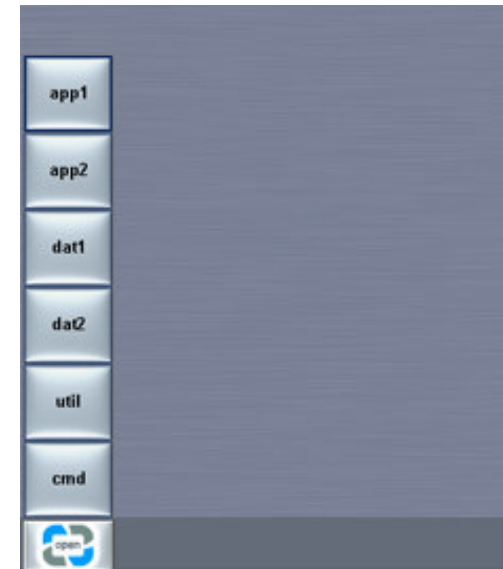
Cmd
Clicking on this button will give you the following options: quit, shut down, and restart.
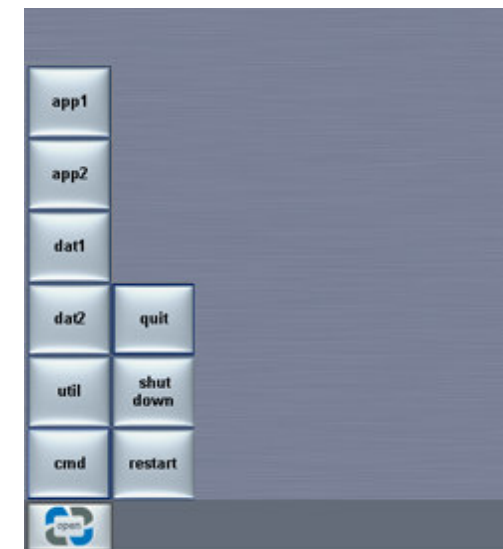
Quit allows you to exit the Open Labs GUI and return to the Windows XP environment.

Shut Down will power down your neKo™.

Restart will restart your neKo™.

Note

To return to the Open Labs GUI, simply launch the Open Labs GUI from your Windows XP program list, or click on the shortcut provided on your Windows XP desktop.

Util

The util (Utilities) button allows access to utilities that you might need while working on your neKo™. When you click on the util button, you will see the following:

file nav – File Navigator – Use this to browse files on your operating system. To launch a file or program or to navigate into a directory you will need to left click the icon to the left of file/directory name. Double clicking is not required. This program supports drag and drop operations. The right click menu has quite a bit of functionality built into it.
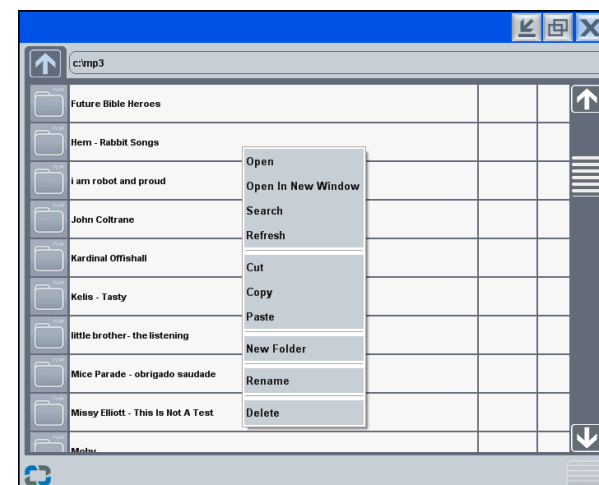
search – Click on the search icon to search for files on your operating system.
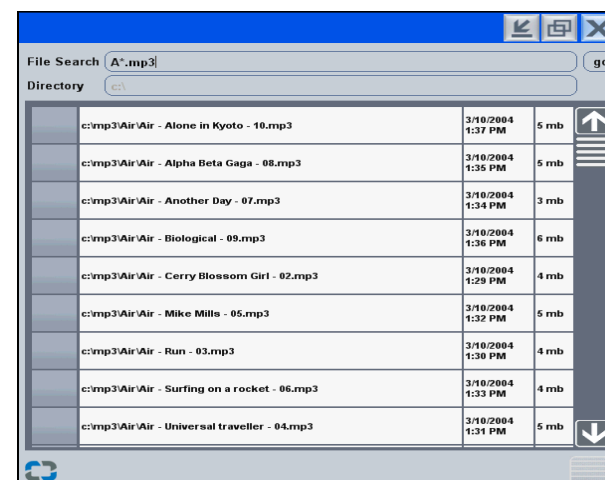
Search will always default to start searching at the root of the C:\ drive. Searches are recursive meaning that all child folders will also be searched. To search in another directory you can pick a directory to search from the file navigator. Standard wild card characters can be used to search.

Sound Card – by clicking on the sound card button, you are able to bring up the MAudio 10/10 sound card control panel.

Touch Screen – use to calibrate your touch screen and display settings.

Set Password – click the set password button to set your password to protect the settings that you have made to your neKo™. By default there is no password set. Once the password is set to some value then a password will be required upon startup, setting the password and opening the sound card control panel.

dat1, dat2

Each major music program installed on your neKo™ will have a button for easy access to that program's projects and data. By clicking on the program's button, you will be taken directly to the projects that you have created for that program. The content of this button is customizable. Directories, single files, or applications can be added to this button. Items can be added by dragging them from the file navigator. Items can be removed through the right click menu.

app1, app2

Next to these buttons you will find shortcuts to all of the major music programs (applications) installed on your neKo™. Clicking on the icon for the program will launch the application. The content of this button is customizable. Directories, single files, or applications can be added to this button. Items can be added by dragging them from the file navigator. Items can be removed through the right click menu.

When you install new applications, you can add these applications to the GUI by dragging the executable (or shortcut) onto the icon in the Open Labs GUI. To delete programs from the Open Labs GUI, simply right click and select "Delete".

Pre-installed Music Software

Your neKo™ is shipped with the following pre-installed music software applications, as well as an assortment of VSTi synthesizers, and instruments.

- **Karsyn** – see Appendix A for documentation

- **Tracktion** – for documentation, go to:
  http://www.mackie.com/products/tracktion

- **Orion Pro** – for documentation, go to:
  http://www.synapse-audio.com

Note

Please check the CD included with your neKo™ for additional software applications that have not been pre-installed.

Using the MIDI Controllers

On your neKo™, you will find the following MIDI controllers:

- Master Controller (Alpha Controller)

- Linear Controller (Fader)

- Rotary Controller

Master Controller (Alpha Controller)

The Master Controller (also referred to as the Alpha Controller) is located on the upper right side of your neKo™. The Master Controller has been assigned to the Open Labs GUI for easy access to your music programs, and files.

The knob on the upper left side of the Master Controller is used as the master volume for your neKo™.

The middle row of buttons are labeled to show what corresponding functions they will perform in the Open Labs GUI.

The top row of buttons are used to access the sub menus within each major GUI function. Clicking the button will take you directly to the corresponding function in the GUI.

The number pad (below the master volume) is used to easily and efficiently enter numbers if a program you are using requires number input.

The joystick and arrow keys on the right side of the Master Controller work similar to the arrow keys on your keyboard. Use the joystick control to arrow through menus, text, or program functions on your neKo™.

With the exception of the Master (Alpha) Controller, the remaining MIDI controllers are assignable through your music software. Please refer to the instructions included with your software applications for information about assigning these controls to your software.

Using Your Mouse, Keyboard, and Special Keys

The neKo™ keyboard is no different than the standard 101-key QUERTY keyboard. Depending on your order, the keyboard may be built into your neKo™, or you can use an external keyboard. Unlike an Apple Macintosh keyboard, the neKo™ keyboard has a 'windows' key located between the

Ctrl and Alt button to the left of the spacebar. The Windows key allows immediate access to the Microsoft Windows Start Menu. From the Start Menu, you can launch all your applications, configure settings, and browse for data or shutdown your neKo™.
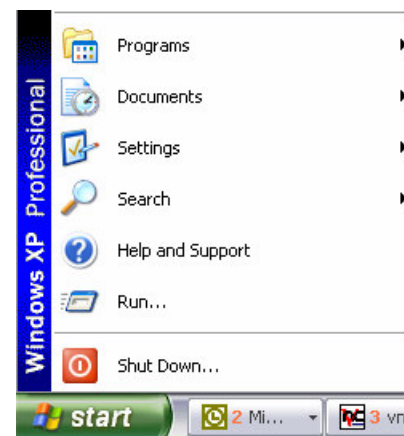
Your track pad has two main buttons: left and right. The left track pad button is mostly used to select objects, or to launch programs. The right track pad button is used to call up auxiliary menus and properties of objects.

In general, to access or launch an application, you would double-click the left track pad button while it is hovering over the desired icon.

Sometimes, you may need to 'drag' an object. To move an object from one folder to another, or to reposition onscreen icons, you would move these objects by dragging. To drag an object, position your track pad pointer over the icon, press and hold down the left mouse button and then proceed to move the object to its new location. When you release the left track pad button, your object or icon will be placed in its new location. Dragging does not always work and it may be disabled by the program that you are using.

You can also select multiple items by grouping them using the left track pad button. When you position the pointer over an

empty area on your desktop, you can hold down the left track pad button and proceed to drag a rectangle over several objects. Releasing the left track pad button will highlight all the objects or icons that were within the area of the rectangle created by dragging the pointer. Selecting multiple objects allows you to move and assign attributes to all the objects at once rather than doing each individually. For example, you may wish to delete four files in your music folder. You can use this method to select the 4 items and then hit the DELETE key on your keyboard to send these items to the recycle bin.

While in Microsoft Windows XP, one of the most popular keystrokes is the Control-Alt-Delete command. Simply press the Control, Alt, and Delete key simultaneously, and you will invoke the Windows Task Manager. Windows Task Manager allows you to restart your computer or quit applications that are either not running, or locked. Anytime your system should experience problems, it is always a good idea to do a Control-Alt-Delete to see whether the application in question is 'not responding'. If it isn't responding, you can highlight the application, and press the 'end task' button. This will allow you to restart the application from scratch.

Other important keystrokes recognized in the Windows XP environment are the function keys clearly labeled F1 to F12. The function keys are used by your applications and may have different functions from one program to the next. The function keys serve as shortcuts (sometimes called quick-keys) to open menus, execute commands, or toggle settings.

Using USB Devices

The neKo™ comes with two USB port in the back panel and two ports in the front. If you require more USB ports, you can purchase a USB hub. Typically USB devices also require you to have Windows XP USB drivers in order for the device to work properly in Microsoft Windows. The drivers are provided by your USB device manufacturer, and can be downloaded from their support site on the Internet.

Using CD-RW Drive

The CD-RW drive can be opened by pressing the release button located below the ejection tray. Because Microsoft Windows supports bootable CDs, it is important that you do not leave any CDs that are bootable in the CD-RW drive so that you will not boot into the CD accidentally.

Adding CDs into the CD-RW Drive while the neKo™ is running will sometimes initiate pop-up menus. This depends on how the CD was written. For example, typical software installation CDs have pop-up menus to assist in installation of its software when the CD is first inserted into the CD-RW drive. Alternatively, inserting an audio CD into the CD-RW drive will initiate CD-Player to play.

The CD drive can be used to burn files onto blank recordable CDs. Recordable CDs are sold at most computer stores and provide an inexpensive method of backing up your critical files.

You may use any number of programs to burn CDs with your CD-RW drive. Microsoft Windows XP will author CDs as well. To use the Microsoft tool, navigate to the Start button, and then double-click on My Computer. If you have a desktop icon for My Computer, it should look like this:

My Computer

Double-clicking on My Computer will open a window showing all your storage devices. Insert a black recordable CD (CD-R) into your CD-RW drive and your CD-RW drive icon should change to look like this:

CD Drive (F:)
CD-R

Double-clicking on this icon, will open a window that is empty except for a legend to the left:
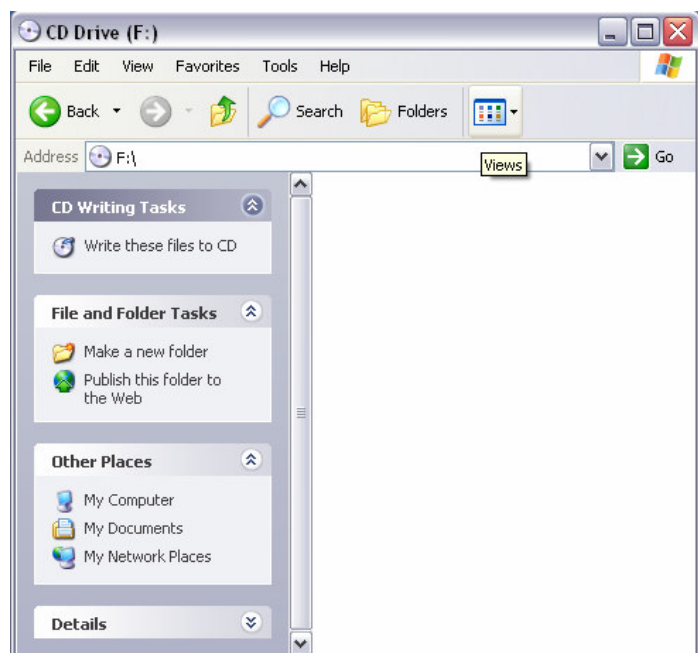
Using the drag-and-drop method, you can place multiple files into the empty area within the right pane of this window. Files should start to populate this empty area. Keep in mind that the maximum amount of data you can store on a single CD-R is approximately 700 MB, or 80 minutes of audio wav files.
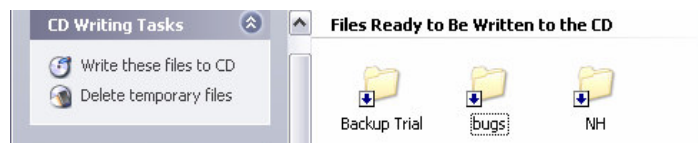
When you are done, select:
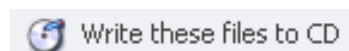
Another pop-up will appear and will provide a walk-through with step-by-step instructions to complete your CD. These step-by-step pop-ups are called Wizards. Microsoft loves to use wizards, and you will encounter many wizards while using Windows XP.

Simply follow the Wizard to the end and your CD will be finished.

Using the Internet

The network adapter allows you to connect a high-speed network to your neKo™. Depending on your setup, the network could be local area only (just connects to other computers around you) or to the Internet. neKo™ will support a10 Mbits or 100 Mbits network. The neKo64™ will support a 1000 MBits network.

Anytime you connect to the Internet, it is vital that you use the same precautions as you would use with a normal computer. Because you should value your neKo™ investment, it is recommended that you keep Internet activities to a minimum to

reduce risks of computer viruses, hackers, pop-ups, and other vulnerabilities inherent on the Internet.

Internet use for the neKo™ should be restricted to the following:

- Connection to Microsoft to run updates of service packs. (please check with Open Labs support for compatibility of Microsoft updates)

- Technical support with Open Labs.

- Updating virus definitions for your anti-virus protection.

- Collaboration with other musicians in sharing of music, data, or files.

- Network printing and local file sharing.

Adding Software to your neKo™

Adding new software to your neKo™ is not unlike adding software to your home computer. The process still requires that you have the software, either on a CD ROM or resident on your hard drive from an Internet download. System requirements of your neKo™ should meet that of your software, or installation will fail. For example, you cannot install Macintosh software in an neKo™, or install Windows 98 compliant software. Your neKo™ runs Microsoft Windows XP Professional, and will only accept software that works on this platform.

As a guideline, most current software sold at your music supplier will work on an neKo™. It is only with older software applications that you should practice caution during installation. If you are uncertain whether software applications will work in the Microsoft Windows XP environment, please contact your software manufacturer.

Instructions for installing software are provided in the software package you wish to install. Please read the software's user guide for step-by-step instructions, or visit its web site for support.

Please be aware that there may be compatibility issues with some third party software. Your neKo™ is extremely stable with the software installed as shipped. Open Labs does not recommend installing untested freeware, shareware or firmware to your neKo™. If you have any questions about particular software products, please contact Open Labs support, or the software manufacturer.

New Software Installation Considerations

If you plan to add your own software, be sure you meet all the following criteria:

- The software you wish to install is compatible with Microsoft Windows XP Professional.

- The software does not conflict with software that is already on your system. An example of this is having two brands of anti-virus software running at the same time.

- The software you are installing has support. Open Labs does not support software that is not part of the factory installation.

- Your neKo™ meets or exceeds the recommended system requirements of the software you wish to install.

Also ensure that you have the necessary disk space needed to install the program.

Open Labs has provided anti-virus software for your neKo™. This software is included, but due to potential compatibility and performance issues with some music production software, it has not been installed. If you plan on connecting your neKo™ to the internet, we recommend that you install anti-virus software. Please make sure that your virus definitions are updated regularly.

Restore Disk

Open Labs has provided a restore disk CD in the event that you wish to return your neKo™ software to its factory shipped configuration.

To restore your neKo™ software, reboot your neKo™ with the restore disk CD in the CD drive. Then, simply follow the instructions on the screen. Feel free to contact Open Labs support if you have any problems.

Chapter

4

Inside your neKo™

A guide to working with the internal components of the OpenSynth™ neKo™

The insides of your neKo™ look very much like a the inside of a computer If you have never worked with the inside of a computer, please read this chapter carefully, and consult Open Labs for assistance. Most of the components are delicate and are sensitive to rough handling, static electricity and magnetic fields.   Practice these precautions before proceeding with hardware work:

- Do not work on hardware with the neKo™ plugged in.

- Always work on your neKo™ on a flat table-top and not on the carpet or floor.

- Do not use excessive force on any components within the case.

- Keep all hardware in anti-static bags until installed.

- Avoid moisture and wet surfaces.

- When in doubt, consult technical support.

New Hardware Installation Considerations

If you wish to add more onboard memory, hard disk storage, or additional PCI boards you will need to upgrade your neKo™. When adding new hardware, the following considerations should be made:

- All hardware should be in the Microsoft Hardware Compatibility List for Microsoft Windows XP. If it is not, then you risk the chance of device or system malfunction, or system corruption, which may require system recovery.

- Your hardware should comply with the TYAN motherboard specifications. For example, use only PC2700, PC2100, and PC1600 Registered DDR memory when you wish to upgrade onboard memory. If you do not use specific memory for your system, you will experience instability and perhaps even data corruption. Ideally all memory should be from the same manufacturer and of the same speed and type. Motherboard specification for other onboard devices can be found in the motherboard manuals provided or from download.

- Additional hardware should not over cramp other components. It is not recommended that you overload your neKo™ with too many internal devices. This can cause too much heat output. For example, connecting 4 IDE hard drives, plus 4 SATA drives would be a bad idea. Too much heat will cause hardware to fail.

- Noise reduction should be optimized by securing all loose cables with recommended cable-ties, or using rubber-insulated ribbons. Ensure that no cables are brushing up against moving fans.

Opening your neKo™

To open your neKo™, you will need to remove the screws securing the end-bells (on both sides of the neKo™). There are two screws securing each end-bell that require a metric screwdriver to remove. The screws are located on the underside of the center of the end-bells. Once the screws have been removed, the main control panel cover can be lifted and secured by the attached support brace(s).

The motherboard is the main platform in which all neKo™ components are connected. It connects directly to PCI devices, memory modules, processors, battery, and power supply. Other devices connect to the motherboard via cables. These devices include hard drives, CD-ROM drives, external peripherals (mouse, keyboard, network cable, USB devices), and cooling fans. Detail schematics of the motherboard can be found in the motherboard manual provided with your neKo™.

The standard neKo™ board, the TYAN TIGER K8W is displayed in Appendix A of this manual. All the motherboard connectors are clearly labeled so that you can easily identify where the cables go. This diagram is also helpful in identifying hardware failures. For example, if your hard drive is not detected by your neKo™, you can check to see whether the cable has been detached by tracing the cable from the motherboard to the hard drive (more about Hard Drives will be discussed later).

Perhaps the most relevant areas of this diagram are where the PCI slots are located (for the installation of video cards, audio cards, and DSP cards), and the DIMM 1-4 slots (for installing additional memory). Other than the need to install additional hard drives, the PCI slots and DIMM slots are your main areas of future upgrades. Some software requires proprietary audio or DSP cards to be installed in PCI slots, and it never hurts to add more DIMMs to boost the onboard memory.

Upgrading other areas of the neKo™ can be tricky and may require a professional technician's assistance. Feel free to

contact Open Labs technical support for assistance in these other areas.

Installing Memory

You can install additional memory (DIMMS) into your neKo™ via the DIMM slots. There are 4 DIMM slots on your motherboard and are labeled 1 to 4.

- Always install memory beginning with DIMM 1 slot.

- AMD Opteron processors support 64-bit (non-interleaved) or 128-bit (interleaved) memory configurations.

- Use Registered DDR SDRAM modules for the neKo64™.

- (128MB, 256MB, 512MB, 1GB, and 2GB registered PC2700/PC2100/PC1600). Note: You can use unregistered RAM for the p4 model (neKo™).

- All installed memory DIMMS are automatically detected at boot-up.

- Never install memory with the power plugged in.
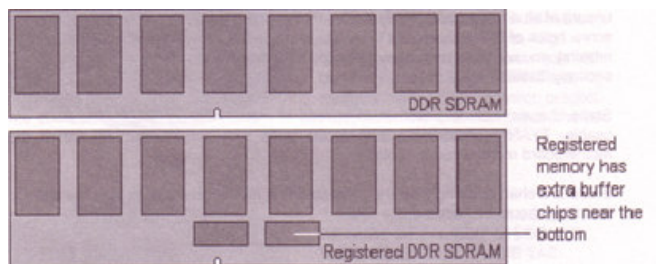
Memory Installation Procedures

When you install the memory module, make sure that it aligns properly with the memory slot. The modules are keyed in such a way that they can only fit in the slot with one orientation. Two plastic latches located at the end of the memory slot need to be opened before the memory is inserted. Once the memory is seated into the slot correctly, the latch will close and lock the DIMM in place. Sometimes you may need to close the latch yourself.
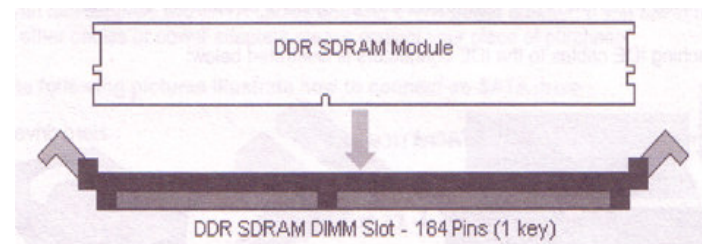
To remove DIMMS, you will need to detach the latches at the end of the memory slot. By detaching the latches, the memory module (DIMM) will be released.

Adding and Attaching Hard Drives to neKo™

The neKo™ supports IDE hard drives. The IDE cable is keyed in such a way that it will only connect to the hard drive and motherboard one way. The power adapter also connects to the hard drive in only one way, as the following diagram indicates:

Attaching IDE cables to the IDE connectors is illustrated below:
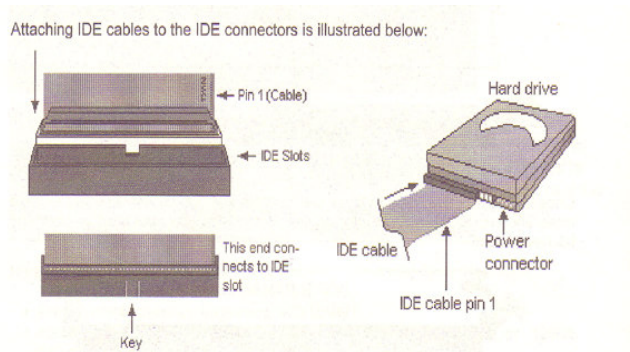
A standard IDE cable has three connectors. One connector is at one end and it is usually blue and the other two connectors are spaced closed to one 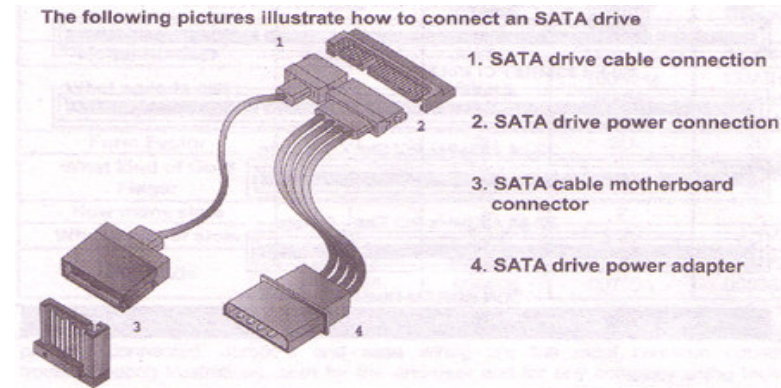another. The blue end connects to the motherboard and the other two ends plugs into the hard drive(s). Each cable with three connectors can connect two hard drives to the motherboard.

On the motherboard, there are two channels to connect your IDE cable. The black connector designates the PRIMARY IDE channel and the white connector designates the SECONDARY IDE channel. Since each channel may support a single IDE cable that connects to two hard drives, the neKo™ can support up to four IDE hard drives if both channels are used. You should always use the PRIMARY IDE channel before you populate the SECONDARY IDE channel.

The neKo™ also supports serial ATA (SATA) drives. There are four SATA channels for you to connect SATA drives. You must have SATA cables and SATA supported hard drives for this to work.

The following pictures illustrate how to connect an SATA drive

1. SATA drive cable connection

2. SATA drive power connection

3. SATA cable motherboard connector

4. SATA drive power adapter

Installing Add-In Cards

As mentioned earlier, it is important that the Add-in card you wish to install in the neKo™ is compliant with your motherboard and Microsoft Windows XP. You can check the compatibility of your card by consulting the manufacturer's resources (manual and website).

Your neKo™ has a single AGP slot and 5 PCI slots. In general, video adapter cards require the AGP slot and most other cards can fit into a PCI slot. What slot each device requires is clearly labeled on the packaging of the card.

In addition to the hardware adapter card, there should be drivers associated with this particular device. A driver is software that needs to be loaded into Windows XP in order for it to work. Sometimes, there may be a custom software application that needs to be loaded in addition to the hardware driver. The application is designed for you to get the most out of your new adapter card. As always, it is highly recommended that you read the hardware's installation procedure before installing the card. For example, your hardware may conflict with another piece of hardware already installed, and you may need to disable that onboard device before your new add-in will work. Reading the installation instructions will prevent serious system problems from occurring.

Tiger K8W S2875 Board Parts and Jumpers

J7	Chassis Intrusion Connector
J9	CMOS Clear
	Pin 1-2 Close: Normal (Default)
	Pin 2-3 Close: Clear CMOS
J12	USB1.1 Header
J15	USB2.0 Header
J22	SATA 1 Connector
J21	SATA 2 Connector
J14	SATA 3 Connector
J20	SATA 4 Connector
J26	Gigabit Ethernet LAN
	Closed: Disable
	Open: Enable
J32, J40	IEEE 1394a Headers
J34	Game Port Header
J35	Aux_in Line_in Connector
J36	CD Audio_in
J38	Front panel audio Header
	5-6, 9-10 Close: Rear panel audio output(Default)
	Open: Front panel audio output

P1_FAN — CPU1 Fan Connector
P2_FAN — CPU2 Fan Connector
FAN1 / FAN2 / FAN3 / FAN4 — Chassis Fan Connector

J8 Front Panel Connector

Power Supply
The Tiger K8S S2875 is EPS12V and ATX12V compatible. Use one of the two combinations below:
☐ 2 power connectors: EPS12V (24-pin) + EPS12V (8-pin) power connectors
☐ 3 power connectors: ATX12V (20-pin) + Drive 12V (4-pin) + ATX12V (4-pin) power connectors
Check User's Manual for details

OSE P/N: 12-0012-350K   http://www.TYAN.com   Rev. 1.00

Karsyn Documentation

Karsyn is a live performance workstation software application for virtual instruments. The software is based on the product "forte" by Brainspawn, Inc. Open Labs has modified the interface, and updated the design to support touch screen users. Karsyn (and forte) is designed for musicians transitioning from hardware rack-mount rigs, and uses the concept of stackable horizontal modules. The modules consist of a Control Module at the top, output busses for controlling access to audio device outputs, and instrument modules for controlling sound sources.

Below you will find basic documentation to get you started using Karsyn. For additional information, you can view the complete documentation for "forte" at: www.brainspawn.com.

Key Features

- **Low Latency Multiple Instrument Hosting** – play up to 32 virtual instruments live with mixing and routing to multiple audio outputs.

- **Performance Automation** – Reconfigure virtual instruments and MIDI routing instantly with remote controlled "scenes."

- **Advanced MIDI Routing and Filtering** – Independent routing and filtering per MIDI input port; MIDI control of audio effect plug-ins, MIDI Clock tempo synchronization.

- **Audio Effects** – Add audio effects to audio inputs, instruments or audio buss outputs.

- **Audio Thru** – Process live audio input through audio effects with very low latency.

- **Virtual Set List** – SceneView displays the set of upcoming configurations in full screen view.

- **Performance Features** – Auto-start on boot up, auto recovery, remote control, SceneView and other features eliminate the need to use the keyboard and mouse during performance.

Control Module

The top rack space is the Control Module. On the Control Module you can:

- Turn rack power on or off. When off, Karsyn does not consume CPU power for audio processing and closes the audio outputs

- Load and save racks

- Add, remove, duplicate, and hide output busses

- Create and manage scenes

- Configure program options

- Rename plug-ins (open the Add Module menu and right click to rename)

- View CPU utilization

- MIDI Panic

Output Busses

On each buss you can:

- View audio levels going into the audio output device (post buss effects) with the peak level LED

- Change the volume of all audio routed to the buss with the buss volume fader (post buss effects.)

- Add, remove or reorder VST and DirectX audio effects

- Display the console for each VST and DirectX audio effect

- Select an audio output device

Adding and Deleting Output Busses

- Adding an output buss can be accomplished in several ways:

- Selecting File|New|Buss menu

- Pressing [CTRL] + [INSERT] on your keyboard

- Right-clicking on the Control Module or a Module and selecting 'Add Audio Output Buss'

- Pressing the Buss 'Add' button on the Control Module

To delete the selected output buss, as indicated by the Selection Caret, press [DELETE] on your keyboard, the Buss 'minus' button on the Control Module, or right-click on the output buss and select 'Remove'.

Instrument Modules

Below the output busses are the instrument modules. Each contains one VSTi or DXi instrument.

On each module you can:

- Adjust the volume of the instrument output (post effects)

- View MIDI input activity

- Display or hide the console for the instrument

- Mute or Solo the module

- Add, remove or reorder audio effects

- Display the console for audio effects

- Select an output buss

Note

Karsyn will only work with Instruments that have their own User Interface.

Adding and Deleting Instrument Modules

Adding an Instrument Module can be accomplished in several ways:

- Select the File|New|Module menu item

- Press the [INSERT] key on your keyboard

- Right-click on the Control Module or a Module and select 'Add Module…'

- Press the Module 'Add' button on the Control Module

To delete an Instrument Module, as indicated by the Selection Caret, press [DELETE] on your keyboard, the Module "minus" button on the Control Module, or right-click on the Instrument Module and select 'Remove'.

Instrument Console

Each instrument has its own user interface called a "Console". Consoles can be either displayed or hidden.

Docking and Floating the Instrument Console

The console may either be docked (embedded in the window below the Instrument Module strip) or floating (shown in a separate window).

To float a docked console, double click on the docking handle or single click on the float button at the top left of the console window.

To dock a floating window, double click on the title bar of the console window.

Adding and Removing Effects

VST and DirectX audio effects may be inserted into either modules or output busses.

To insert an effect, right-click on an audio effects patch point and select the DirectX effect from the pop-up menu.

To delete an effect, right-click on the effect you wish to remove and select 'Remove Audio Effect' on the pop-up menu.

You can use the up/down arrows on the right to view different effects in the chain.

By right-clicking and opening the insert menu, you may right click on an effect and add it to your favorites, rename it, or hide it.

Working with Audio Inputs

Audio inputs allow you to run audio through modules and busses. Audio inputs are available on any instrument module in the Audio Input Configuration tab of the console.

You may select the stereo audio input source and monitor the input levels. Select "No Audio Input" from the input selection box to turn off audio input.

Although some instruments will process audio input, most will not. For this reason there is a special module you can create from the add module menus called 'Brainspawn Audio Input'. This module is a module without an instrument. In the Audio Input module, the audio is sent directly from the input to the module's insert effects.

WARNING: Be very careful when using audio inputs that you do not accidentally enable an audio feedback loop!

Advanced Performance Recovery

Advanced Performance Recovery (APR) is a performance feature designed to provide Karsyn some additional resilience in a live situation.

Preferences

You can change Karsyn's preferences by selecting Options | Preferences from the menu bar or by right-clicking on the Control Module and selecting "Preferences."

MIDI Input Ports

Enable/Disable MIDI Input Ports – Use this list to enable or disable MIDI input ports for use in Karsyn. If an input port is not checked in this list, it will not be opened for input and it will not be included in the MIDI Configurations list.

Leave MIDI ports open – If checked, Karsyn will open MIDI input ports when started, but will not close them when rack power is turned off. It will always close ports when exiting. When un-checked, input ports will be closed when rack power is turned off.

Remapping or Disabling MIDI Program Changes

Incoming MIDI Program Changes may optionally be remapped or disabled. If remapping is on, the program change is remapped to a configurable list of presets. If remapping is off, the program change is sent directly to the instrument which may or may not respond by changing its internal preset. The list can be of any length up to 128 entries.

Additionally, MIDI Program Changes can be ignored. When checked, program change messages are not remapped or passed to the instrument.

The remap is:

Output Program = Input Program MODULO number of Entries

Key Range and Transpose

You may configure an instrument to respond to only a subset of the entire 128 note MIDI keyboard. To do this, click the mouse in the keyboard graphic. The disabled upper and lower ranges will be displayed in grey. You may change the upper and lower ranges a note at a time by clicking the up/down arrow buttons for each.

Training is a convenient way to automatically set the upper and lower ranges. Press [Train] and a message will show "Training…" Now simply press two notes (simultaneously or one after another) on your MIDI input device. The instrument module must not be muted, and the rack power must be on for training to succeed.

The MIDI keys that lie within the enabled range are then transposed by the amount shown in the transpose box.

Press Reset to enable the entire keyboard.

Key Range and Transpose are MIDI input port-specific. You will have as many ranges and transpose settings as you have input ports. Highlight the input port at the left to display and change the configuration on the right.

Channel Map

Incoming MIDI data such as notes or controllers that are "per-channel" may be remapped to a different channel or disabled. Remapping can be useful if the instrument supports only certain channels (e.g. only channel 1) or if you wish to do complex routing of multiple MIDI input devices. Disabling can be useful if you have one controller split between multiple

instruments. The list contains each remap entry up to 16 with a "from" and a "to" column. The list will only display entries that are remapped to different channels. Any channel not listed in the "from" column is not remapped.

For example, in the figure below, channel 8 is remapped to channel 5 before being sent to the instrument, but channel 6 is not in the list so it is sent to the instrument without modification. Also, channel 2 is disabled so events on channel 2 will be discarded instead of being sent to the instrument.

To add a remap entry, press [New]. To delete a remap entry, highlight the entry in the list and press [Delete].

Training is a convenient way to automatically set the "from" field without having to consult your MIDI controller configuration. Select a "from" field, press [Train] and the field will change to "Training…" Now simply press a note or change a controller on your MIDI input device and the field will automatically change to the channel of the MIDI data you sent. You must manually select the "to" field. The Instrument Module must not be muted, and the rack power must be on for training to succeed. If the [Auto-Train] button is on when [New] is pressed, training will be started automatically.

If you manually configure a remap entry so that "from" and "to" fields are identical, the entry will not remain in the list if you close and re-show the console.

Channel remap is MIDI input port-specific. You will have as many channel maps as you have input ports. Highlight the input port at the left to display and change the map on the right.

Continuous Controller Map

Incoming MIDI continuous controller data may be remapped to a different controller number or disabled. They can also be configured to toggle the instrument's controller value. This can be useful to remap, for example, your foot-pedal MIDI input to B4's Leslie speed so that one tap slows Leslie and a second tap speeds it up. The list contains each remap entry up

to 128 with a "from" and a "to" column, along with a "toggle" checkbox. The list will only display entries that are remapped to different controllers or configured to toggle. Any controller not listed in the "from" column is not remapped and toggle is disabled. Any disabled controllers will not be passed to the instrument.

To add a remap entry, press [New]. To delete a remap entry, highlight the entry in the list and press [Delete].

Training is a convenient way to automatically set the "from" field without having to consult your MIDI controller configuration. Select a "from" field, press [Train] and the field will change to "Training…". Now simply change a controller on your MIDI input device and the field will automatically change to the controller number you sent. The Instrument Module must not be muted and the rack power must be on for training to succeed. If the [Auto-Train] button is on when [New] is pressed, training will be started automatically.

You must manually select the "to" field. Some instruments provide a comprehensive list of MIDI controllers which will be shown in the "to" field. Many, unfortunately, do not and you must consult the instrument manual and select a numerical field.

If you manually configure a remap entry so that "from" and "to" fields are identical, the entry will not remain in the list if you close and re-show the console.

Continuous controller remap is MIDI input port-specific. You will have as many controller maps as you have input ports. Highlight the input port at the left to display and change the configuration on the right.

Toggle Mode

Toggle Mode configures a controller mapping to toggle the "To" value between 0 and 127 each time the "From" value transmits a value of 127. This feature allows you to assign MIDI foot switches to features on the instrument like an

organ's rotary speed: click once to slow the rotors down and click again to speed them up.

Saving and Loading MIDI Configurations

MIDI Configurations are assigned to an Instrument Module, but some settings can be saved and reloaded from a file. Press [Save] to save a configuration. This includes for each MIDI input:

- Key Range
- Transpose
- Channel remap
- Controller remap

This allows frequently used MIDI configuration parameters to be applied to other Instrument Modules or stored for future use. When a MIDI Configuration is loaded you may optionally load or ignore specific portions of the configuration.

Setting a Default MIDI Configuration

A last-used MIDI configuration is always saved with an Instrument Module. Usually, this MIDI configuration will be reloaded automatically on any future Instrument Module using the same instrument. However, if you select a MIDI configuration to be the default, it will be used instead.

Insert Manager

Right click and select Insert Manager to control the order of inserts.

Showing Effects Consoles

Double click an effect to show its console. Working with audio effects consoles is very similar to working with instrument consoles. The only differences are that the console window is

always floating (never docked) and there are no Program Map or MIDI Configuration tabs. Close an effect console by clicking the upper right hand close button.

Using Effect Presets

Accessing an Audio Effect Preset is identical to accessing instrument Presets.

MIDI Routing to Effects

- MIDI input is sent to insert effects. The filtering is different for effects than for the instrument module:

- Program changes from MIDI are never sent to insert effects

- The Instrument Channel and Controller remap is not applied to MIDI before it goes to the effect. Each effect has its own Controller remap to apply automation.

- Insert effect Controller mapping is not MIDI input port specific (unlike an instrument's controller remap)

- Instrument Transpose is applied so that plug-ins like harmonizers can build chords on incoming audio data from MIDI notes.

Insert Effect Automation using MIDI Continuous Controllers

Incoming MIDI continuous controller data may be remapped to VST or DirectX 8.0 automation parameters. They can also be configured to toggle the effect's parameter. This can be useful to remap, for example, your foot-pedal MIDI input to Amplitube's stomp effects. The list contains each remap entry up to 128 with a "from" and a "to" column, along with a "toggle" checkbox. The list will only display entries that are remapped to automation parameters. Any controller not listed in the

"from" column is not remapped and toggle is disabled. Any disabled controllers will not be passed to the instrument.

To add a remap entry, press [New]. To delete a remap entry, highlight the entry in the list and press [Delete].

Training is a convenient way to automatically set the "from" field without having to consult your MIDI controller configuration. Select a "from" field, press [Train] and the field will change to "Training…".   Now simply change a controller on your MIDI input device and the field will automatically change to the controller number you sent. The Instrument Module must not be muted and the rack power must be on for training to succeed. If the [Auto-Train] button is on when [New] is pressed, training will be started automatically.

You must manually select the "to" field. Most effects provide a list of automatable parameters which will be shown in the "to" field.

Working with Scenes

Scenes are one of the most powerful features of Karsyn. Scenes enable you to use a single rack for an entire performance and automate preset changes, output routings, and mutes.

Each rack file can contain multiple scenes visible in the Scene window.

Each Scene contains a complete configuration including:

- A preset for every instrument in the rack. This does not need to be a saved preset because the actual settings of each instrument are saved instead of just a name.

- An effect preset for every audio effect in the rack. Again, this does not need to be a saved preset.

- A MIDI input enable for each port on each Instrument Module

- A MIDI keyboard range, transpose, channel and controller remap for every MIDI input on every Instrument Module

- An output Buss selection for every Instrument Module

- A tempo (which many VST and DirectX plug-ins will follow)

Note that the Program Change remap is not included in a Scene. Scenes may be optionally changed using incoming MIDI program changes. When this feature is enabled, MIDI Program Remap does not work because the program change messages are used to change scenes instead of being remapped and send to the instruments.

Creating Scenes

Scenes can be created by clicking the Scene button to the left of the scene list on the Control Module. The new scene will be given a name that represents the time and date the scene was created.

Scenes can also be created from within the Scene Manager (described below).

Changing Scenes from the Control Module

You can change the current scene by clicking the up or down arrow to the right of the scene list.

Changing Scenes from the Keyboard

You may also advance to the next scene by pressing [SPACE], or by assigning a shortcut key to each scene.

Scene Tempo

Each scene can contain a tempo instruments and effects can sync to. In addition, you may optionally choose to have Karsyn adjust the tempo dynamically from incoming MIDI Clock messages from a chosen MIDI input port.

To alter the Scene's tempo, click the tempo button in the Control Module.

The Tempo dialog will let you adjust tempo using the horizontal slider control, or by typing the tempo into the edit box.

If you click Follow MIDI Clock on input port, Karsyn will follow the tempo of incoming MIDI Clock messages from the highlighted input port.

Open Labs

**5 8 1 0   T r a d e   C e n t e r
B u i l d i n g   1 ,   S u i t e   1 0 0
A u s t i n ,   T e x a s   7 8 7 4 4**

C o n t a c t   I n f o r m a t i o n
G e n e r a l   I n f o :   i n f o @ o p e n l a b s . c o m
S a l e s   I n f o :   s a l e s @ o p e n l a b s . c o m
T e c h   S u p p o r t :   t e c h @ o p e n l a b s . c o m
P h o n e :   5 1 2 - 4 4 4 - 6 2 2 2
F a x :   5 1 2 - 2 3 3 - 2 9 6 3